

CLAIMS

1. A sound module attachable to an object, the sound module comprising:
a piezo amplification device having a top and a bottom and an interior;
a piezoelectric element coupled to the piezo amplification device substantially at the top
5 of the piezo amplification device;
said piezo amplification device being attachable to the object at the bottom of the piezo
amplification device;
wherein when the piezo amplification device is attached to the object, the interior of the
piezo amplification device and the object form a cavity.
2. The sound module according to Claim 1 further comprising:
an electrical circuit electrically coupled to the piezoelectric element;
the electrical circuit being configured to generate audio signals; and,
the piezoelectric element being configured to convert the audio signals into sound that
15 resonates within the object.
3. The sound module according to Claim 2 wherein:
the piezo amplification device includes a plurality of concentrically stacked rings.
- 20 4. The sound module according to Claim 3 wherein the rings are stacked with the largest
ring forming the bottom of the piezo amplification device and the smallest ring forming
the top.

5

15

20

5. The sound module according to Claim 3 wherein the stack of rings comprises an integral unit.
6. The sound module according to Claim 3 further comprising:
a tail portion extending radially out from one of the rings;
wherein the electrical circuit is coupled to the tail portion.
7. The sound module according to Claim 3 wherein at least two of the rings are different shapes from each other.
8. The sound module according to Claim 1 wherein the piezo amplification device comprises semi-rigid foam.
9. The sound module according to Claim 1 wherein the piezo amplification device has at least one hole therein.
10. The sound module according to Claim 1 wherein the object comprises an inflatable object.
11. A sound module attachable to an object, the sound module comprising:
a piezoelectric element;
piezo amplification means for housing the piezoelectric element and for attaching the

piezoelectric element to the object; and,

circuit means electrically coupled to the piezoelectric element for generating audio signals;

wherein the piezoelectric element is configured to convert the audio signals generated by the circuit means into sound that resonates within the object.

12. A method of producing sound comprising:

housing a piezoelectric element at substantially the top of a piezo amplification means ;
electrically coupling a circuit designed to produce audio signals to the piezoelectric

element;

coupling the piezo amplification means to an object to form a cavity between the piezo amplification means and the object.

13. The method according to Claim 12 further comprising:

attaching a tail to the piezo amplification means; and,
housing the circuit on the tail.

14. A sound module attachable to an inflatable object, the sound module comprising:

a semi-rigid pyramid shaped piezo amplification device having a top, a bottom and an interior, the pyramid shape being formed by concentrically stacking rings such that a ring stacked closer to the top of the piezo amplification device is smaller than a ring stacked closer to the bottom of the piezo amplification device;

the piezo amplification device being attachable to the inflatable object at a bottom most ring of the piezo amplification device;

wherein when the piezo amplification device is attached to the inflatable object, the interior of the piezo amplification device and the inflatable object form a cavity;

5 a piezoelectric element coupled to one of the rings at the top of the piezo amplification device;

an electrical circuit electrically coupled to the piezoelectric element;

the electrical circuit being configured to generate audio signals; and,

the piezoelectric element being configured to convert the audio signals into sound that resonates within the inflatable object.

15. The sound module according to Claim 14 wherein:

the semi-rigid piezo amplification device comprises an integral unit.

15 16. The sound module according to Claim 14 further comprising:

a tail portion extending radially out from piezo amplification device;

wherein the electrical circuit is coupled to the tail portion.

17. The sound module according to Claim 14 wherein at least two of the rings are different shapes from each other.

18. The sound module according to Claim 14 wherein the semi-rigid piezo amplification

device comprises foam.

19. The sound module according to Claim 14 wherein the semi-rigid piezo amplification device has at least one hole therein.

5

20. The sound module according to Claim 14 wherein the inflatable object comprises a balloon.

2023.10.10 09:05:00